

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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UNITED STATES OF AMERICA,

08 Cr. 826 (RMB)

- against -

AAFIA SIDDIQUI,

Defendant.

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**DEFENDANT AAFIA SIDDIQUI'S MOTION *IN LIMINE*
TO EXCLUDE EXPERT TESTIMONY AND OPINIONS
REGARDING POSSIBLE BULLET FRAGMENTATION
AND LOSS OF EVIDENCE DUE TO THE INABILITY
TO SECURE THE CRIME SCENE AND RELATED TESTIMONY**

Defendant Aafia Siddiqui ("Dr. Siddiqui" or "Defendant"), by and through her undersigned counsel, hereby moves for an order *in limine* barring the government from presenting expert testimony that speculates as to the likelihood of M-4 rounds fragmenting or the possible other causes for the lack of physical evidence supporting the government's case. Specifically, the defendant seeks to exclude expert evidence (1) speculating that the M-4 rounds (bullets) fragmented upon impact with a solid surface to explain the government's failure to recover said rounds at the scene without a underlying scientific basis to warrant such a conclusion; (2) speculating or opining that the period of time between the shooting of Dr. Siddiqui and the investigation of the scene was the likely cause of the loss of evidence supporting the government's allegations that Dr. Siddiqui fired two rounds from an M-4.

A hearing is requested pursuant to the requirements of *Daubert v. Merrell Dow*, 509 U.S. 579 (1993), *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1997), and F.R.Evid. 702.¹ In support of the motion, counsel will rely upon the following incorporated memorandum of law. In addition, counsel rely upon the Declaration of William Tobin In Support of Defendant's Motion In Limine To Exclude Expert Testimony and Opinions Regarding Possible Bullet Fragmentation and Loss of Evidence Due to Inability to Secure Crime Scene dated December 14, 2009 and Curriculum Vitae of William A. Tobin styled as Exhibits "A" and "B" respectively.

ARGUMENT

I. THIS COURT SHOULD CONDUCT A HEARING REGARDING THE ADMISSIBILITY OF THE PROPOSED EXPERT TESTIMONY IN THIS CASE

A. Factual Background and Introduction To the Argument

By this motion, defendant seeks a ruling *in limine* barring the government from introducing purported expert testimony suggesting the possible fragmentation of bullets allegedly fired by Dr. Siddiqui from an M-4 rifle and the inability to secure the alleged crime scene as explanations for the government's failure to recover physical evidence substantiating the firing of the M-4.

To our understanding, inspection of the crime scene involved recovering carpet samples soaked in Dr. Siddiqui's blood, recovering two nine millimeter shell casings corresponding to the weapon allegedly used to shoot Dr. Siddiqui, but no recovery of any evidence substantiating that Dr. Siddiqui fired the M-4 in question. The government seeks to introduce expert testimony through Mr. Rosati, formerly an employee of the FBI labs and currently a contractor for the FBI, to explain away the lack of evidence by testifying that the bullets fired from the M-4 *might* have

¹ Rule 702, adapting the *Daubert* criteria, requires a showing that expert evidence meets certain criteria of reliability in both theory and application.

shattered or fragmented when they hit a hard surface or they *may* have disappeared because of the failure to preserve the crime scene. A hearing on this proffered expert testimony is requested.

B. Rule 702 and the *Daubert* and *Kumho Tire* criteria

The admission of expert evidence is governed by F.R. Evid. 702, which states in relevant part:

If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Pursuant to Rule 104(a) of the Federal Rules of Evidence, the proponent of the expert opinion must satisfy Rule 702's criteria by a preponderance of the evidence.

In determining whether the criteria set out in Rule 702 is satisfied, the United States Supreme Court has held that a trial judge must determine whether “the reasoning or methodology underlying the testimony is scientifically valid and . . . whether that reasoning or methodology properly can be applied to the facts in issue.” *Daubert*, 509 U.S. at 592 U.S. at 592-593.

Daubert set out four basic criteria to guide this assessment: (1) whether the theory can be, and has been, tested; (2) whether the technique is subject to publication and peer review; (3) the known or potential error rate together with the existence of standards and controls; and (4), the degree of acceptance within the relevant discipline. These criteria are not, however, exclusive. *Wills v. Amerada Hess Corp.*, 379 F.3d 32, 48 (2d Cir. 2004).

In *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (U.S. 1999), the Supreme Court further held that the gate-keeping requirement of *Daubert* was equally applicable when the testimony was based upon the personal experience of the expert. *See Kumho* at 526 U.S. 137 at 152

(holding "that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.")

In setting the guidelines for a *Daubert* challenge, the Second Circuit has noted that the manner in which a trial judge goes about exercising his or her gate-keeping function, *i.e.*, the nature of the *Daubert* challenge itself, "is fluid and will necessarily vary from case to case." *Amorgianos v. Amtrak*, 303 F.3d 256, 266 (2d Cir. 2002). The Second Circuit has cautioned that evidence routinely admitted prior to *Daubert* has not been "'grandfathered'" from gate-keeping scrutiny. *United States v. Williams*, *supra*, 506 F.3d at 162. The Court continued: "Thus, expert testimony long assumed reliable before Rule 702 must nonetheless be subject to the careful examination that *Daubert* and *Kumho Tire* require." *Id.*

Accordingly, regardless of the number of times that Mr. Rosati has previously been qualified to testify as an expert on firearms, Dr. Siddiqui is, at a minimum, entitled to a hearing at which the government will be required to demonstrate, by a preponderance of the evidence, that Mr. Rosati's testimony in this case satisfies the criteria of Rule 702, *Daubert* and *Kumho tire*.

**C. Mr. Rosati's Purported Opinions Regarding the Possible Fragmentation
Of Rounds Allegedly Fired From an M-4 Amounts to Speculation
And NOT a Well-grounded Scientific Hypothesis Based on Collected Data**

The accompanying declaration of Mr. William Tobin establishes that portions of Mr. Rosati's testimony cannot be squared with the kind of rigor found in the research and studies of an expert in the field of metallurgy.² For example, Mr. Rosati's opinion does not specify the

² Mr. Tobin is a forensic metallurgist, holding a Bachelor of Science degree in Metallurgy from Case Institute of Technology in Cleveland, Ohio, and graduate studies in metallurgy and materials science at Ohio State University and the University of Virginia. See Ex. B (Curriculum Vitae of William A. Tobin) at 1. Work experience includes service as an infantry man with the United States Marine Corps in Vietnam, three and a half years as a Special Agent

particular ammunition used in the M-4. Nor does his opinion specify the composition of the possible target surfaces that may have caused the explosion or fragmentation of the projectile. As a forensic metallurgist, Mr. Tobin notes that such data is “critical to assessing energy absorption and, thus, energy available for deformation and fracture of various projectiles under dynamic loading.” (See Tobin Decl., ¶ 11). Without a determination of these basic parameters, Mr. Rosati’s opinion lacks the basis “that others in the field would recognize as acceptable.” *Kumho*, 526 U.S. 137 at 151.

1. The Testimony is NOT Based upon Sufficient Facts or Data

The critical data in determining whether or not a bullet is likely to fragment upon impact with a surface are: (1) the composition of the bullet; (2) the composition of the surface being struck; and (3) the velocity at which the bullet is traveling. (Tobin Decl., ¶¶ 10-11). None of these factors, however, is addressed by Mr. Rosati’s proffered testimony. In particular, neither Mr. Rosati’s opinion nor the discovery provided by the government specify the type of round believed to have been fired from the M-4 in this case. Mr. Tobin, in his declaration, points out that the type of ammunition carried by US Armed Forces in combat is the M855. (Tobin Decl., ¶ 12). The M855 round is constructed with a copper alloy jacket, antimonial lead plug (aft), and mild steel penetrator (forward). (Tobin Decl., ¶ 12). This type of round is designated as a “penetrator,” and is designed to penetrate mild steel or even in some cases, hardened steel. (Tobin Decl., ¶ 12). It has a significantly higher yield and tensile strengths than a conventional bullet and requires much higher forces to deform and fracture (fragment). (Tobin Decl., ¶ 12). Accordingly, it is actually less likely to fragment than an ordinary bullet. Mr. Rosati’s opinion, however, does not take the critical question of the type of bullet into consideration.

with the Federal Bureau of Investigation (FBI) and twenty-four years in the FBI Laboratory in Washington, D.C., serving as Forensic Metallurgist and as the chief forensic metallurgist for the last twelve years.

Further, Mr. Rosati's characterization of the target surface, or wall, as "hard" is not a quantifiable description of the properties of the potential target surface. (Tobin Decl., ¶ 11). A description of a surface as "hard" without modifiers is not a meaningful term in the field of metallurgy. (Tobin Decl., ¶ 11). Without a relative comparison of the rigidity of the wall, a scientific evaluation of its ability to absorb energy and, correspondingly, the likelihood that a projectile would fragment upon striking the surface is not possible. (Tobin Decl., ¶¶ 10-12). Accordingly, Mr. Rosati's opinion is entirely lacking in particularized facts or data required by Rule 702.

2. The Testimony is not the Product of Reliable Principles and Methods

Without consideration of the particular projectile characterization, the target wall rigidity as well as considerations of the angle and velocity with which the shell might have struck the target (target and projectile geometries), the testimony that the shell might have shattered or fragmented cannot be considered the product of reliable principles and methods. (Tobin Decl., ¶ 12). Rather, it is reduced to common knowledge that bullets can deform, and possibly fragment, against "hard" objects, and that bullets can possibly penetrate other surfaces. (Tobin Decl., ¶¶ 12-13). Common knowledge, however, is not within the purview of Rule 702. Likewise qualifiers such as might or could constitute speculation and are not appropriate to scientific expert testimony. (Tobin Decl., ¶ 15).

3. The Witness has NOT Applied Reliable Principles and Methods To the Facts of the Case

As set out above, Mr. Rosati's proffered opinion that the bullet might have fragmented as an explanation for the failure to recover the shells, fails to apply the principles and methods of metallurgy to either quantify or substantiate the possibility. To do so Mr. Rosati, at a minimum, would have had to determine the type of round fired, the rigidity of the surface being struck, and consider the probable angles at which the projectile would have struck the target surface.

Without consideration of the individual characteristics of either the projectile or the target surface, there is no basis in scientific inquiry to support an inference as to the possible behavior of any of the specific projectile's (bullet's) possible behavior upon impacting the target material (wall) involved in the incident at issue. (Tobin Decl., ¶ 12). Accordingly, the opinion furnished by Mr. Rosati is indisputably based on a subjective assessment of general projectile behavior, or speculation, and not the product of a reliable application of generally accepted principles and methods to the case at hand.

**D. The Government's Proffer of Mr. Rosati's Testimony
Regarding Possible Causes for the Destruction or Loss of Evidence
From the Alleged Crime Scene is Devoid
Of any Underlying Scientific Basis or Specialized Knowledge**

The government fails to proffer any relationship to scientific knowledge or particularized knowledge or experience on which Mr. Rosati's opinions regarding the potential loss or destruction of evidence rest. In fact, the government does not proffer what the possible results of failing to maintain a crime scene are in this case and how those results would account for the failure to recover rounds fired in an enclosed space. Without the a proffer of what the specific hazards are in failing to preserve a crime scene and how they relate to the failure to recover any evidence that the M-4 was actually fired, it is impossible to even begin to determine whether the testimony is the product of sufficient facts or data, reliable principles and methods, or whether Mr. Rosati has applied the principles and methods reliably to the facts of the case. Until the government provides a basic foundation for the testimony, an evaluation of its admission cannot be made of its reliability, much less the testimony admitted.

Conclusion

For the reasons set forth above, this Court should schedule a hearing to determine whether the proffered evidence satisfies Rule 702, *Daubert* and *Kumho Tire*.

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Respectfully submitted,

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